

Section 10-5: Tangents

By the end of this lesson, you should be able to answer:

- How do you use properties of tangents?
- How do you solve problems involving circumscribed polygons?

Vocabulary:

1. Tangent

2. Point of Tangency

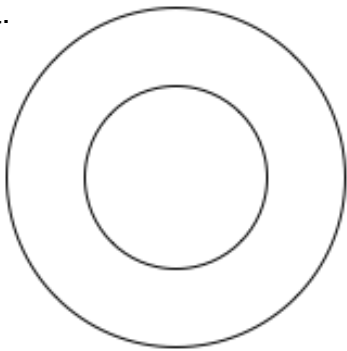
3. Common Tangent

Theorem 10.10 - Tangents

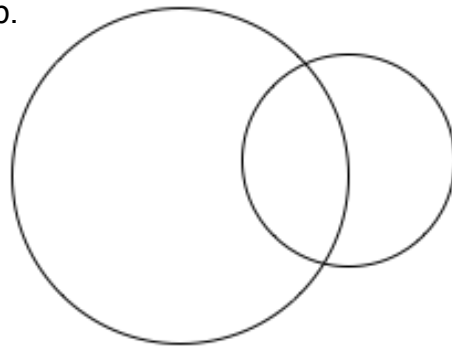
Theorem 10.11 - Two Segments

Example 1: Draw in the common tangents for each figure. If no common tangent exists, state *no common tangent*.

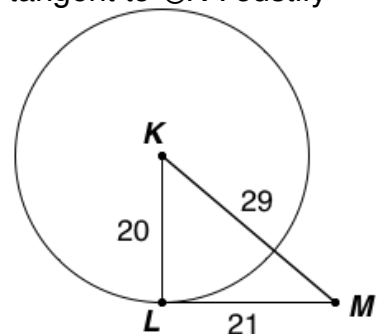
a.



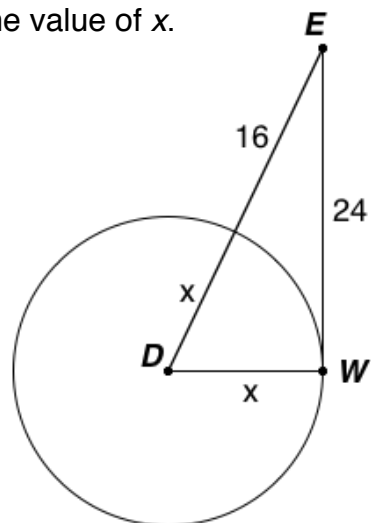
b.



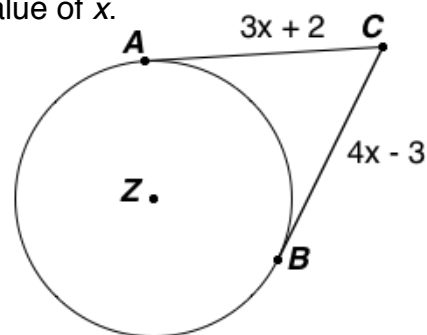
Example 2: \overline{KL} is a radius of $\odot K$. Determine whether \overline{LM} is tangent to $\odot K$. Justify your answer.



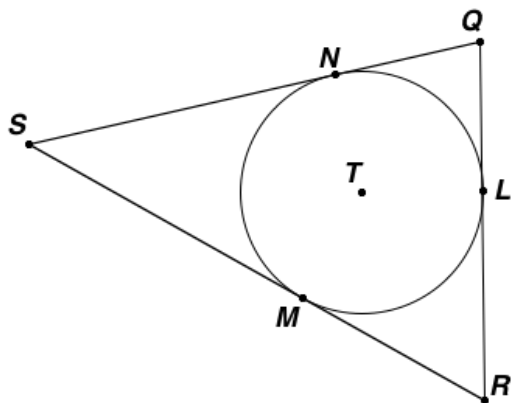
Example 3: In the figure, \overline{WE} is tangent to $\odot D$ at W . Find the value of x .



Example 4: \overline{AC} and \overline{BC} are tangent to $\odot Z$. Find the value of x .



Example 5: Some round cookies are marketed in a triangular package to pique the consumer's interest. If $\triangle QRS$ is circumscribed about $\odot T$ with $NQ = 2$ cm, $QR = 8$ cm, and $SM = 10$ cm, find the perimeter of $\triangle QRS$.



Problem Set:

"Stop thinking what's good for you, and start thinking what's good for everyone else. It changes the game." – Stephen Basilone & Annie Mebane